1 Checking radio, only for cars with green illuminated instrument cluster

1.1 Checking radio, only for cars with green illuminated instrument cluster

1.1.1 Contents

- Radio inoperative ⇒ ⇒ page 2
- Poor/intermittent FM reception and interference ⇒ ⇒ page 2
- One or more speakers inoperative ⇒ ⇒ page 3
- LED for anti-theft-coding does not flash in switched off position ⇒ ⇒ page 4
- Checking roof antenna ⇒ ⇒ page 6
- Tape sound reproduction is dull or not clear ⇒ ⇒ page 7
- Autoreverse switches over constantly or to early ⇒ ⇒ page 7

Notes:

- *Multimeter Fluke 83*
- *Connector test kit VW 1594*
- *Valid wiring diagram*
- *Test antenna*
- *Operating instructions for the appropriate radio*

CAUTION!
DO NOT damage, enlarge or bend connector terminals or cavities by forcing probes into them when performing electrical checks. Always use connector test kit VW 1594 to make the necessary electrical connections.

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

1.2 Radio inoperative

1.2.1 Test condition:

- Fuse S237 OK

Check battery voltage	
- Remove radio from instrument panel, ⇒ Repair Group 91 - Remove 8-pin connector (power supply), black, from radio - Set measuring range selector on Fluke 83 to 20 V - Connect black test lead to 8-pin connector, terminal 8 - Connect red test lead to 8-pin connector, terminal 7	
Voltage NOT OK	Voltage OK

Check wiring to radio according to wiring diagram

Check fuse (back side of radio)	
- Remove radio fuse - Set measuring range selector on Fluke 83 to - Check fuse continuity	
Sound signal	NO sound signal

Replace radio

Replace radio fuse

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

1.3 Poor/intermittent FM reception and interference

1.3.1 Test conditions:

- Press FM button
- Select a strong (local) radio station
- Telescoping antenna fully extended, roof antenna mounted securely
- Reception conditions OK (DO NOT test inside)

Check radio	
- Remove radio from instrument panel, ⇒ Rep. Group 91 - Connect test antenna	
Reception NOT OK	Reception OK

Replace radio	Check roof antenna ⇒ page 6

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

1.4 One or more speakers inoperative

1.4.1 Test conditions:

- Speaker balance and fader settings in center position
- Connector for speakers on radio OK

Check speaker system	
- Remove radio from instrument panel, ⇒ Rep. Group 91, remove 8-pin connector (speaker), brown, from radio - Set measuring range selector on Fluke 83 to 200Ω - Connect test leads as indicated in table ⇒ below	
Measuring result > 4 Ω	Measuring result < 4 Ω

Check speaker	
- Remove connector from speaker, ⇒ Rep.Group 91 - Connect test leads to speaker	
Measuring result 2,5 ... 3 Ω	Measuring result > 3 Ω

Check wiring from radio to speaker for open circuit	Replace speaker

Check speaker	
- Remove connector from speaker, ⇒ Rep.Group 91 - Connect test leads to speaker	
Measuring result 2,5 ... 3 Ω	Measuring result > 2,5 Ω

Check wiring from radio to speaker for short circuit	Replace speaker

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

1.4.2 Test connections at 8-pin connector (speaker), brown

Test lead	Speaker left front	Speaker right front	Speaker left rear	Speaker right rear
red	terminal 5	terminal 3	terminal 7	terminal 1
black	terminal 6	terminal 4	terminal 8	terminal 2

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

1.5 LED for anti-theft-coding does not flash in switched off position

Check coding of radio	
- Turn radio ON - Press "SEEK" and "SCAN" buttons simultaneously	
Display shows "SAFE", then "1000"	Display shows "CODE", then "1000"

Replace radio

Input security code	
- Input security code using the station preset buttons - Press "SEEK" and "SCAN" buttons simultaneously until display shows "SAFE", and then a frequency - Remove ignition key or turn off the radio	
LED flashes	LED DOES NOT flash

Radio OK

Replace Radio

Protected by copyright. Copying for private or commercial purposes, in part or in whole is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

1.6 Checking roof antenna

Check voltage supply for antenna amplifier	
- Turn radio OFF - Remove radio from instrument panel, ⇒ Rep. Group 91 - Disconnect antenna wiring from radio Current measuring with Multimeter Fluke 83 - Set measuring range selector on Fluke 83 to 200mA - Insert red test lead into antenna connector at radio - center wire and connect black test lead to antenna wire - center wire - Turn radio ON	
Current approx. 40 - 60mA	NO current

Radio and antenna wiring OK, replace roof antenna

- Turn radio OFF - Set potentiometer on VW 1301 to range 490 - Connect one lead of VW 1301 to center wire of antenna connector at the radio (Use connector test kit VW 1594) - Connect the other lead of VW 1301 to red test lead of Fluke 83, connect black test lead of Fluke 83 to ground - Turn radio ON	
NO current	Current approx. 40 - 60mA

Replace radio

Check antenna wiring from radio to roof antenna	
- Turn radio OFF - Reconnect antenna wiring to radio and reinstall radio - Pull down headliner in rear to access antenna mounting, ⇒ Rep. Group 70 - Disconnect antenna wiring from roof antenna - Connect one lead of VW 1301 to center wire of antenna connector (Use connector test kit VW 1594) - Connect the other lead of VW 1301 to red test lead of Fluke 83, connect black test lead of Fluke 83 to ground - Turn radio ON	
NO current	Current approx. 40 - 60mA

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

Center wire/shielding in antenna cable are shorted. Before replace wiring, check antenna connection under center console.	Replace roof antenna

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.

Protected by copyright. Copyright by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG.

1.7 Tape sound is dull or not clear

1.7.1 Test condition:

♦ Radio reproduction OK

Check tape sound reproduction	
- Play test cassette	
Sound OK	Sound NOT OK

Use functional tapes and advise customer to refer to tape operation hints in radio operating manual supplement

Clean tone heads	
- Clean tone heads by using special cleaning cassette	
Sound OK	Sound NOT OK

Use functional tapes and advise customer to refer to tape operation hints in radio operating manual supplement	Replace radio

1.8 Autoreverse switches over constantly or to early

Check tape sound reproduction	
- Use test cassette	
Does not switch uncontrollably	Switches uncontrollably

Use functional tapes and advise customer to refer to tape operation hints in radio operating manual supplement	Replace radio

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by Volkswagen AG. Volkswagen AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by Volkswagen AG.